

| Notice of Allowability | Application No. | Applicant(s) | |
|-------------------------------|------------------------|---------------------|--|
| | 10/602,817 | YOKOYAMA ET AL. | |
| | Examiner | Art Unit | |
| | Davetta W. Goins | 2632 | |

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to _____.
2. The allowed claim(s) is/are 1-7.
3. The drawings filed on 25 June 2003 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 6/25/03
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

DETAILED ACTION

1. Claims 1- 7 are allowed.
2. The following is an examiner's statement of reasons for allowance:

It is well known in the art to determine the deviation of actual braking or actual deceleration with respect to a target braking or target deceleration. Miyakoshi et al. (US Pat. 6,724,300 B2) discloses a vehicle system including a brake ECU 16 for controlling the brake control actuator 50, during cruise control. The actual deceleration is determined along with the target deceleration. An alarm device 52 is activated in response to a command from the inter-vehicle control ECU for informing the driver that the inter-vehicle distance becomes equal to or less than the approach distance and thereby prompts the driver to perform a braking operation (col. 10, lines 1-45). Soga et al. (US Pat. 6,572,200 B2) discloses a brake control system including a CPU for estimating the braking amount required by the vehicle operator on the basis of the master cylinder pressures Pm1, Pm2 detected by the pressure sensors 66, 68 and the depression stroke St detected by the stroke sensor 70. Then the CPU calculates a final target deceleration Gt of the vehicle on the basis of the estimated required braking amount, and a target deceleration pressure Pti (i=fl, fr, rl, rr) of each wheel on the basis of the final target deceleration Gt so as to control the wheel cylinder pressure of each wheel to the target braking pressure Pti (col. 7, lines 40-51). An alarm is used to indicate any abnormality such as disconnection occurring in the pressure sensors 66, 68 and the stroke sensor 70 (col. 13, lines 38-44). Seki et al. (US Pat. 6,131,063) discloses a brake device system that includes a driver condition detecting circuit 4 for detecting driving conditions of the driver and then issuing an

Art Unit: 2632

alarm if the dangerous level is high or indicates the vehicle being in danger, viz., a vehicle collision is impending, the dangerous-level determining circuit 10 issues an alarm signal to warn of collision against the driver. A measure to vary the volume or tone of alarm sounding in accordance with a dangerous level would provide an effective alarming against the driver (col. 8, lines 23-53). Although there are references that teach of determining target deceleration and actual deceleration as well as providing an alarm based on braking conditions, none of the prior art of record disclose in their entirety the claimed vehicle brake warning comprising a brake operation amount detection device, a target deceleration computation device for computing a target deceleration of a vehicle, a difference level calculation device for calculating, as the difference level, a deviation between the target deceleration and the actual deceleration and a warning issuing device for issuing warning in accordance with the difference level.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Sugimoto et al. (US Pat. 6,292,753 B1), Matsumoto et al. (US Pat. 6,429,788 B2), and Mays, II (US Pat. 6,545,438 B1), which include braking systems.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 571-272-2957. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**DAVETTA W. GOINS
PRIMARY EXAMINER**



D.W.G.
September 27, 2004

Davetta W. Goins
Primary Examiner
Art Unit 2632